What is claimed is:

1. A method of making a quartz-shell drum comprising the steps of:

heating a quartz tube to a temperature at least sufficient to enable quartz to flow;

enlarging a diameter of a portion of the heated quartz tube to a predetermined size;

cutting the enlarged tube perpendicular to a longitudinal axis to create a shell having a desired height;

grinding a top edge and a bottom edge of the shell to form smooth radii;

fusing the top and the bottom edges to create top and bottom rounded edges; and

affixing a top and a bottom head to the top and the bottom edges, respectively.

2. The method recited in Claim 1, wherein the quartz tube heating step comprises heating the quartz tube using a high-temperature hydrogen/oxygen torch.

3. The method recited in Claim 2, wherein the torch is used to heat the quartz tube to approximately 2300°C.

4. The method recited in Claim 2, wherein the heating step comprises heating a central portion of the quartz tube, and the diameter-enlarging step comprises:

prior to the heating step, affixing a headstock end of the quartz tube for rotation to a glass lathe, leaving a tailstock end opposed to the headstock end decoupled from lathe rotational motion;

during the heating step, rotating the heated quartz tube using the lathe, applying centripetal acceleration for permitting a wall of the quartz tube to spread outward, thereby enlarging the quartz tube diameter along the central portion, leaving a diameter at the headstock and the tailstock ends smaller than the central portion diameter; and

when the quartz tube diameter reaches a predetermined size, stopping the lathe rotation.

5. The method recited in Claim 4, wherein the diameter-enlarging step further comprises, prior to the rotating step, affixing a diameter-controlling means at a predetermined distance from the quartz tube longitudinal axis, the predetermined distance selected to limit an enlargement of the quartz tube central portion diameter to the predetermined size.

6. The method recited in Claim 5, wherein the diameter-controlling means comprises a graphite roller affixed for rotation to a support, a longitudinal axis of the roller substantially perpendicular to the quartz tube longitudinal axis, the roller positioned to control the central portion diameter.

7. The method recited in Claim 6, wherein the diameter-controlling means further comprises means for rotating the roller and a cooling bath positioned to encompass a lower portion of the roller, the bath adapted to hold a cooling fluid through which the roller is rotatable by the rotating means.

8. The method recited in Claim 4, further comprising the step, prior to the cutting step, of separating the quartz tube central portion from the headstock end.

9. The method recited in Claim 8, wherein the separating step comprises using the torch to heat a location adjacent an end of the central portion adjacent the headstock end sufficiently to enable the central portion to be pulled apart therefrom.

10. The method recited in Claim 1, further comprising the step, following the enlarging step, of reheating the tube.

11. The method recited in Claim 1, wherein the cutting step comprises affixing the central portion for rotation to a cutting machine having a diamond wheel thereon.

12. The method recited in Claim 1, wherein the grinding step comprises using a belt grinder and then hand grinding.

13. The method recited in Claim 1, further comprising the steps of cleaning the shell in ammonium bifluoride following the grinding step, and washing and drying the shell.

14. The method recited in Claim 1, wherein the fusing step comprises heating the top and the bottom edges with a torch to seal and fuse the quartz;

15. The method recited in Claim 1, further comprising the step, following the fusing step, the steps of cleaning the shell and annealing the cleaned shell in an annealing oven.

16. A quartz-shell drum made by the method of Claim 1.

17. A method of making a quartz-shell drum comprising the steps of:

heating a quartz tube;

enlarging a diameter of a portion of the heated quartz tube to a predetermined size;

cutting the enlarged tube perpendicular to a longitudinal axis to create a shell having a desired height;

grinding a top edge and a bottom edge of the shell to form a smooth radius on the bottom edge and an inwardly angled top edge;

fusing the top and the bottom edges to create top and bottom rounded edges; and

affixing a top and a bottom head to the top and the bottom edges, respectively.

18. A quartz-shell drum made by the method of Claim 17.